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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,903	03/05/2002	Max Shurgalin	13445-007001 / 6065A	6522
26161	7590	12/16/2003	EXAMINER	
FISH & RICHARDSON PC 225 FRANKLIN ST BOSTON, MA 02110			NGUYEN, TU T	
			ART UNIT	PAPER NUMBER

2877

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/090,903

Applicant(s)

SHURGALIN ET AL.

Examiner

Tu T. Nguyen

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

Detailed Office Action

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10,19,21-22,40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krahbichker et al (6,055,058).

With respect to claims 1,40,41, Krahbichker discloses a method for monitoring the quality of a fiber. The method comprises: directing a light 9,11 (fig 5) toward a side of a fiber 1 (fig 5), detecting 13 (fig 5) the reflected light, monitoring the quality of the fiber based on the measured light (abstract).

Krahbichker does not disclose monitoring the photonic crystal fiber. However, it would have been obvious to modify Krahbichker's system to test different types of fiber to reduce the testing cost.

With respect to claim 2, Krahbichker discloses detecting reflected light (fig 5).

With respect to claim 3-10,19,21-22,42-43, Krahbichker does not explicitly disclose monitoring the quality of a fiber by determining a measurement spectrum of the measurement

light. However, the claimed monitoring the quality of the fiber by determining a measurement spectrum of the measurement light would have been known. It would have been obvious to modify Krahbichker's method with the known step above for monitoring different fiber types. Further, it would have been obvious a design choice to manipulate the measurement spectrum by comparing with a reference spectrum or determining an error signal based on a function of the measurement spectrum to facilitate the testing.

Claims 11-17,18,20,44-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krahbichker et al (6,055,058) in view of Inoue et al (5,289,265).

With respect to claims 11-12,44-48, Krahbichker does not disclose monitoring the fiber in a drawing process. Inoue suggest monitoring the fiber during the drawing process (column 1, lines 40-50). It would have been obvious to use Krahbichker's method during the drawing process as suggested by Inoue to inspect the fiber in early stage. Further, Inoue discloses adjusting drawing speed based on the condition of the fiber (column 1, lines 45-50).

With respect to claims 13-16,18,20, it would have been obvious to modify Krahbichker's method with different wavelengths or measuring the reflected light with different angles or detecting different types of defect to facilitate the testing.

With respect to claim 17, Inoue discloses light collecting optics 121-123 (fig 1).

Claims 23-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krahbichker et al (6,055,058) in view of Svendsen (5,633,708).

with respect to claim 23, Krahbichker does not explicitly disclose directing light to different regions. Svendsen discloses testing a fiber with different selected regions (abstract). It would have been obvious to modify Krahbichker's method with Svendsen's region selecting means to test the fiber in different regions.

With respect to claim 24, it would have been obvious to modify Svendsen's method to test different regions at the same time to save testing time.

With respect to claim 25, refer to discussion in claim 2 above.

With respect to claims 26,31, refer to discussion in claim 3 above.

With respect to claims 27-29, Svendsen discloses a lens 59 (fig 6) performing all the claimed limitations.

With respect to claims 32,35,38-39, refer to discussion in claim 13 above.

With respect to claims 33-34,36-37, refer to discussion in claim 11 above.

With respect to claim 30, refer to discussion in claim 1 above for detecting the fiber.
Further, Svendsen discloses a broadband light (column 2, lines 20-30).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T Nguyen whose telephone number is (703) 306-9185. The examiner can normally be reached on T-F 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G Font can be reached on (703) 308-4881. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Tu T. Nguyen
Primary Examiner
Group Art Unit 2877

11/26/03